BRUHAT BENGALURU MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 1ST AND FINAL BILL

Name of work: Improvements to Roads, Drains and Construction of culverts in Ananda Badavane, Sir MV Layout and surrounding areas in Ward No.11, Byatarayanapura.

Estimated Cost : Rs. 35.00 Lakhs

Job Code: 011-23-000006

Head of Account : P-3726 Zonal Public Works - POW Works

Name of Agency: Sri Nagoor Lokanadha Reddy, Flat No. 102, Floor No. 02, MSNR Enclave, 2nd Cross, Manorayana palya, RT Nagar Post, Bangalore - 560032.

Work order No: BBMP/EE/BTP/WO/134/2022-23 Dated: 02-03-2023.

	Measurements Recarded on :	10-07-2023							
Sl No	**Description of work**	**Mesurement**				**Qty.**	**Unit**	**Rate**	**Amount**
		No.	**L**	**B**	**D**				
1	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.								
	Qty as per Premeasurement Recorded vide E-Bill Page No. 01 to 02 is =					**383.60**	Cum	160.00	**61376.00**
2	Providing and laying in position Plain Cement Concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.								
	Qty as per Premeasurement Recorded vide E-Bill Page No. 03 is =					**57.00**	Cum	4795.00	**273315.00**
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately)								
	Qty as per Premeasurement Recorded vide E-Bill Page No. 04 to 05 is =					**121.47**	Cum	5411.00	**657274.00**
4	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200								
	Qty as per Premeasurement Recorded vide E-Bill Page No. 06 is =					**7.44**	Tonne	79588.00	**592135.00**

No	Description of work	Mesurement				Qty.	Unit	Rate	Amount
		No.	L	B	D				
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 (M15)								
	Ramp for Culvert								
	Ananda Layout 5th Main	2	5.90	1.00	0.15	1.77			
	Sir MV Layout Cross Road	2	6.20	1.00	0.15	1.86			
		Total Qty =				**3.63**			
	Total	Qty Ltd to App Qty =				**3.60**	Cum	5077.00	**18277.00**

Assistant Engineer
Ward No. 11, Byatarayanapura

Assistant Executive Engineer
Kodigehalli Sub-Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

No	Description of work	Mesurement No.	L	B	D	Qty.	Unit	Rate	Amount
	Measurements Recarded on :	06-07-2023							
6	Providing and Fixing pre cast Covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting, including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete. (Data								
	Covering Slab								
	Ananda Layout 6th Main								
	N/S	1	15.00	0.90		13.50			
		1	3.80	0.90		3.42			
	Ananda Layout Main Road								
	E/S	1	15.00	0.90		13.50			
		1	15.00	0.90		13.50			
		1	12.00	0.90		10.80			
		1	1.80	0.90		1.62			
		1	11.90	0.90		10.71			
		1	15.00	0.90		13.50			
		1	15.00	0.90		13.50			
		1	15.00	0.90		13.50			
		1	10.20	0.90		9.18			
		1	7.00	0.90		6.30			
	W/S								
		1	10.60	0.90		9.54			
		1	12.50	0.90		11.25			
		1	15.00	0.90		13.50			
		1	9.40	0.90		8.46			
		1	15.00	0.90		13.50			
		1	4.70	0.90		4.23			
	Ananda Layout 5th Main								
	N/S								
		1	11.00	0.90		9.90			
		1	15.00	0.90		13.50			
		1	3.00	0.90		2.70			
		1	15.00	0.90		13.50			
		1	10.50	0.90		9.45			
		1	13.00	0.90		11.70			
		1	15.00	0.90		13.50			
		1	15.00	0.90		13.50			
		1	5.40	0.90		4.86			
	S/S								
		1	9.00	0.90		8.10			
	3rd Main Road								
	N/S								
		1	15.00	0.90		13.50			
		1	3.10	0.90		2.79			
		1	15.00	0.90		13.50			
		1	13.50	0.90		12.15			
		Total Qty =				326.16			
		Qty Ltd to App Qty =				325.80	Sqm	1834.00	597517.00

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Assistant Engineer
Ward No. 11, Byatarayanapura

N. Lokanayakulu

Assistant Executive Engineer
Kodigehalli Sub-Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

No	Description of work	Mesurement No.	L	B	D	Qty.	Unit	Rate	Amount
	Measurements Recarded on :	09-07-2023							
7	Providing and Fixing pre cast Covering Slab 250mm thick made out of CC 1:2:4 and jelly 25mm Down size with steel reinforcement including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete. As per Engineer incharge								
	For Culvert								
	Ananda Layout 5th Main	1	5.90	1.20		7.08			
	Sir MV Layout Cross Road	1	6.20	1.50		9.30			
			Total Qty =			**16.38**			
			Qty Ltd to App Qty =			**14.40**	Sqm	4253.00	**61243.00**
8	Loading and Unloading of Stone Boulder / Stone aggregates / Sand / Kankar / Moorum. (Tipper 14 m3)								
	Qty Vide 95% of Item No- (1)					364.42			
	Total					**364.42**	Cum	63.00	**22958.00**
9	Cost of Haulage Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km								
	Qty frm Item No-14					364.42			
	Density of Sand/Debris i.e 1.28 Tonne/Cum		364.42	1.28		466.46			
	Cost of Haulage Excluding Loading and Unloading on Surface Road to a distance of 9.80 Kms		466.46	9.80		4571.28			
	Total					**4571.28**	T.Km	9.00	**41142.00**
			Round off:	2325000.00				Grand Total =	**2325237.00**
				418500.00			GST Charges (18% of Executed cost) =		**418543.00**
				2743500.00				Total Amount =	**2743780.00**

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Assistant Engineer
Ward No. 11, Byatarayanapura

N. Laxmana Reddy

Assistant Executive Engineer
Kodigehalli Sub-Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

BRUHAT BENGALURU MAHANAGARA PALIKE

MEASUREMENT SHEET

PRE-MEASUREMENT

Name of work: Improvements to Roads, Drains and Construction of culverts in Ananda Badavane, Sir MV Layout and surrounding areas in Ward No.11, Byatarayanapura.

Estimated Cost : Rs. 35.00 Lakhs

Job Code: 011-23-000006

Head of Account : P-3726 Zonal Public Works - POW Works

Name of Agency: Sri Nagoor Lokanadha Reddy, Flat No. 102, Floor No. 02, MSNR Enclave, 2nd Cross, Manorayana palya, RT Nagar Post, Bangalore - 560032.

Work order No: BBMP/EE/BTP/WO/134/2022-23 Dated: 02-03-2023.

	Measurements Recarded on :	15-05-2023					
Sl No	**Description of work**	**Mesurement**				**Qty.**	**Unit**
		No.	**L**	**B**	**D**		
1	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.						
	New Drain						
	Ananda Layout 6th Main						
	N/S	1	15.00	1.00	1.00	15.00	
		1	3.80	1.00	1.00	3.80	
	Ananda Layout Main Road						
	E/S	1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	12.00	1.00	1.00	12.00	
		1	13.05	1.00	1.00	13.05	
		1	11.90	1.00	1.00	11.90	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	10.20	1.00	1.00	10.20	
	W/S						
		1	10.60	1.00	1.00	10.60	
		1	12.50	1.00	1.00	12.50	
		1	15.00	1.00	1.00	15.00	
		1	9.40	1.00	1.00	9.40	
		1	6.00	1.00	1.00	6.00	
		1	15.00	1.00	1.00	15.00	
		1	4.70	1.00	1.00	4.70	
	Ananda Layout 5th Main						
	N/S	1	9.20	1.00	1.00	9.20	
		1	11.00	1.00	1.00	11.00	
		1	15.00	1.00	1.00	15.00	
		1	1.20	1.00	1.00	1.20	
		1	10.00	1.00	1.00	10.00	

Assistant Executive E
Kadugodi Sub Div
BBMP, Bangalor

260.55

Sl No.	Description of work	Mesurement				Qty.	Unit
		No.	L	B	D		
		1	8.60	1.00	1.00	8.60	
		1	15.00	1.00	1.00	15.00	
		1	3.00	1.00	1.00	3.00	
		1	3.50	1.00	1.00	3.50	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	15.00	1.00	1.00	15.00	
		1	5.10	1.00	1.00	5.10	
	S/S						
		1	9.00	1.00	1.00	9.00	
	Culvert						
	Ananda Layout 5th Main	1	5.90	1.50	1.00	8.85	
	Sir MV Layout Cross Road	1	6.20	1.80	1.00	11.16	
		Total Qty =				399.76	
		Qty Limited to Approved Qty =				383.60	Cum

139.21

Assistant Engineer
Ward No. 11, Byatarayanapura

N. Lokanatheddy

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl No	Description of work	Mesurement				Qty.	Unit
		No.	L	B	D		
	Measurements Recarded on :	26-05-2023					
2	Providing and laying in position Plain Cement Concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.						
	New Drain						
	Ananda Layout 6th Main						
	N/S	1	15.00	1.00	0.15	2.25	
		1	3.80	1.00	0.15	0.57	
	Ananda Layout Main Road						
	E/S	1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	12.00	1.00	0.15	1.80	
		1	13.05	1.00	0.15	1.95	
		1	11.90	1.00	0.15	1.78	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	10.20	1.00	0.15	1.53	
	W/S						
		1	10.60	1.00	0.15	1.59	
		1	12.50	1.00	0.15	1.87	
		1	15.00	1.00	0.15	2.25	
		1	9.40	1.00	0.15	1.41	
		1	6.00	1.00	0.15	0.90	
		1	15.00	1.00	0.15	2.25	
		1	4.70	1.00	0.15	0.70	
	Ananda Layout 5th Main						
	N/S	1	9.20	1.00	0.15	1.38	
		1	11.00	1.00	0.15	1.65	
		1	15.00	1.00	0.15	2.25	
		1	1.20	1.00	0.15	0.18	
		1	10.00	1.00	0.15	1.50	
		1	8.60	1.00	0.15	1.29	
		1	15.00	1.00	0.15	2.25	
		1	3.00	1.00	0.15	0.45	
		1	3.50	1.00	0.15	0.52	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	15.00	1.00	0.15	2.25	
		1	5.10	1.00	0.15	0.76	
	S/S	1	9.00	1.00	0.15	1.35	
	Culvert						
	Ananda Layout 5th Main	1	5.90	1.50	0.15	1.32	
	Sir MV Layout Cross Road	1	6.20	1.80	0.15	1.67	
		Total Qty =				59.92	
		Qty Limited to Approved Qty =				57.00	Cum

Assistant Engineer
Ward No. 11, Byatarayanapura

Assistant Executive Engineer
Kodigehalli Sub-Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl No	Description of work	Mesurement				Qty.	Unit
		No.	L	B	D		
	Measurements Recarded on :	03-07-2023					
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately)						
	New Drain						
	Raft						
	Ananda Layout 6th Main						
	N/S	1	15.00	0.90	0.15	2.03	
		1	3.80	0.90	0.15	0.51	
	Ananda Layout Main Road						
	E/S	1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	12.00	0.90	0.15	1.62	
		1	13.05	0.90	0.15	1.76	
		1	11.90	0.90	0.15	1.61	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	10.20	0.90	0.15	1.38	
	W/S						
		1	10.60	0.90	0.15	1.43	
		1	12.50	0.90	0.15	1.69	
		1	15.00	0.90	0.15	2.03	
		1	9.40	0.90	0.15	1.27	
		1	6.00	0.90	0.15	0.81	
		1	15.00	0.90	0.15	2.03	
		1	4.70	0.90	0.15	0.63	
	Ananda Layout 5th Main						
	N/S	1	9.20	0.90	0.15	1.24	
		1	11.00	0.90	0.15	1.49	
		1	15.00	0.90	0.15	2.03	
		1	1.20	0.90	0.15	0.16	
		1	10.00	0.90	0.15	1.35	
		1	8.60	0.90	0.15	1.16	
		1	15.00	0.90	0.15	2.03	
		1	3.00	0.90	0.15	0.41	
		1	3.50	0.90	0.15	0.47	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	15.00	0.90	0.15	2.03	
		1	5.10	0.90	0.15	0.69	
	S/S						
		1	9.00	0.90	0.15	1.22	
	Side Wall						
	Ananda Layout 6th Main						
	N/S	2	15.00	0.15	0.58	2.61	
		2	3.80	0.15	0.58	0.66	
	Ananda Layout Main Road						

Assistant Executiv
Kodigehalli Sub
BBMP, Bang

54.54

Sl No	Description of work	Mesurement				Qty.	Unit
		No.	L	B	D		
	E/S	2	15.00	0.15	0.60	2.70	
		2	15.00	0.15	0.58	2.61	
		2	12.00	0.15	0.58	2.09	
		2	13.05	0.15	0.85	3.33	
		2	11.90	0.15	0.75	2.68	
		2	15.00	0.15	0.73	3.29	
		2	15.00	0.15	0.65	2.93	
		2	15.00	0.15	0.65	2.93	
		2	10.20	0.15	0.65	1.99	
	W/S						
		2	10.60	0.15	0.58	1.84	
		2	12.50	0.15	0.58	2.18	
		2	15.00	0.15	0.59	2.66	
		2	9.40	0.15	0.60	1.69	
		2	6.00	0.15	0.75	1.35	
		2	15.00	0.15	0.59	2.66	
		2	4.70	0.15	0.59	0.83	
	Ananda Layout 5th Main						
	N/S	2	9.20	0.15	0.82	2.26	
		2	11.00	0.15	0.58	1.91	
		2	15.00	0.15	0.75	3.38	Av.
		2	1.20	0.15	0.75	0.27	Av.
		2	10.00	0.15	0.60	1.80	
		2	8.60	0.15	0.68	1.75	Av.
		2	15.00	0.15	0.55	2.48	
		2	3.00	0.15	0.55	0.50	
		2	3.50	0.15	0.88	0.92	Av.
		2	15.00	0.15	0.58	2.61	
		2	15.00	0.15	0.59	2.66	
		2	15.00	0.15	0.60	2.70	
		2	15.00	0.15	0.58	2.61	
		2	15.00	0.15	0.59	2.66	
		2	5.10	0.15	0.60	0.92	
	S/S						
		2	9.00	0.15	0.57	1.54	
	Culvert						
	Raft						
	Ananda Layout 5th Main	1	5.90	1.20	0.15	1.06	
	Sir MV Layout Cross Road	1	6.20	1.50	0.15	1.40	
	Side Wall						
	Ananda Layout 5th Main	2	5.90	0.25	0.45	1.33	
	Sir MV Layout Cross Road	2	6.20	0.25	0.45	1.40	
		Total Qty =				**128.41**	
		Qty Limited to Approved Qty =				**121.47**	Cum

Assistant Engineer
Ward No. 11, Byatarayanapura

Assistant Executive Engineer
Kodigehalli Sub-Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl No	Description of work	Mesurement				Qty.	Unit
		No.	L	B	D		
	Measurements Recarded on :	03-07-2023					
4	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200						
	U Shape Drains	**No**	**L**	**Mtrs**	**Kg/m**	**Kgs**	
	Ananda Layout						
	Ananda Layout 6th Main						
	10 mm dia	125	2.10	262.50	0.62	162.75	
	8 mm dia	16	18.80	300.80	0.39	117.31	
	Total					**280.06**	
	Ananda Layout Main Road E/S						
	10 mm dia	815	2.10	1711.50	0.62	1061.13	
	8 mm dia	16	122.15	1954.40	0.39	762.22	
	Total					**1823.35**	
	Ananda Layout Main Road W/S						
	10 mm dia	71	2.10	149.10	0.62	92.44	
	8 mm dia	16	10.60	169.60	0.39	66.14	
	Total					**158.59**	
	10 mm dia	84	2.10	176.40	0.62	109.37	
	8 mm dia	16	12.50	200.00	0.39	78.00	
	Total					**187.37**	
	10 mm dia	163	2.10	342.30	0.62	212.23	
	8 mm dia	16	24.40	390.40	0.39	152.26	
	Total					**364.48**	
	10 mm dia	172	2.10	361.20	0.62	223.94	
	8 mm dia	16	25.70	411.20	0.39	160.37	
	Total					**384.31**	
	Ananda Layout 5th Main						
	10 mm dia	1044	2.10	2192.40	0.62	1359.29	
	8 mm dia	16	156.60	2505.60	0.39	977.18	
	Total					**2336.47**	
	1st Cross to Wards N/S SWD						
	10 mm dia	60	2.10	126.00	0.62	78.12	
	8 mm dia	16	9.00	144.00	0.39	56.16	
	Total					**134.28**	
	RCC Drains Grant Total					**5668.91**	Kgs
	Culverts						
	Ananda Layout 5th Main						
	16 mm	39	2.10	81.90	1.58	171.99	
	12 mm	19	5.90	112.10	0.89	661.39	
	Total					**833.38**	
	Sir MV Layout Cross Road						
	16 mm	50	2.10	105.00	1.58	220.50	
	12 mm	19	6.20	117.80	0.89	730.36	
	Total					**950.86**	
	Culvert Grand Total					**1784.24**	Kgs
						7453.15	Kgs
						7.45	Tonne
	Total					**7.44**	Tonne

Assistant Engineer
Ward No. 11, Byatarayanapura

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore